

CWA COMPLIANCE EVALUATION INSPECTION REPORT
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5

Purpose:

Compliance Evaluation Inspection

Facility:

KJMM Pork & Grain – Range Farm
11405 Range Lane
Marissa, IL 62257

NPDES Permit Number:

N/A

Date of Inspection:

August 27, 2012

EPA Representatives:

Joan Rogers, Environmental Scientist

312-886-2785

State Representatives:

Brian Rodely, Environmental Protection Engineer

618-993-7200

Joe Stitely, Engineer

618-993-7200

Facility Representatives:

Jared Schilling, Owner

Exemption 6 and Exemption 7C

Report Prepared by:

Joan Rogers, Environmental Scientist

312-886-2785

rogers.joan@epa.gov

Report Date:

December 8, 2012

Inspector Signature

 1/7/13

BACKGROUND

The purpose of this report is to describe, evaluate and document the KJMM Pork & Grain – Range Farm facility's compliance with the Clean Water Act (CWA) at its Marissa, Illinois facility on August 27, 2012.

KJMM Pork & Grain – Range Farm is a swine wean to finishing facility located in St. Clair County, Illinois. It was constructed over 20 years ago, but Mr. Jared Schilling and three siblings began ownership approximately three years ago. It is the only facility owned by this partnership. KJMM Pork & Grain – Range Farm (KJMM) is considered a large swine Concentrated Animal Feeding Operation (CAFO) due to the number of hogs greater than or equal to 55 pounds maintained on the facility.

KJMM has approximately 3000 hogs greater than or equal to 55 pounds and approximately 5000 hogs less than 55 pounds. The facility's capacity is 9600 hogs. Mr. Jared Schilling is a Certified Livestock Manager.

To the south, there is an intermittent unnamed tributary adjacent to the facility which flows approximately 1 mile southwest to perennial Mud Creek. Additionally, there is another intermittent unnamed tributary approximately 0.10 mile to the west that flows southwest to perennial Mud Creek. Mud Creek flows 2.3 miles to perennial Kaskaskia River. The Kaskaskia River then flows approximately 33 miles to the Mississippi River, a Traditional Navigable Water (TNW).

Mr. Brian Rodely and Mr. Joe Stitely of the Illinois Environmental Protection Agency (IEPA) discovered discharges of manure and process wastewater during an inspection on April 17, 2012 in response to a citizen complaint. The discharges were due to a leaky pipe, a pipe in the berm of the Stage 3 Holding Pond and land application runoff. Due to the discharges, KJMM was instructed by IEPA to cease discharges and apply for a National Pollutant Discharge Elimination System (NPDES) permit. KJMM has also abandoned the use of drag-lining for the land application of manure.

SITE INSPECTION

Arrival Time:	10:20 A.M.
Exit Time:	12:30 P.M.
Temperature:	80°F
Precipitation:	None the day of the inspection. Rained approximately 1" the night before.
Presented credentials?	Yes
Credentials presented to whom?	Jared Schilling
EPA vehicle parked in approved location?	Yes
Location where EPA vehicle was parked?	By office
Who authorized parking location?	Jared Schilling
Disposable boots worn?	Yes
Other bio-security measures taken:	None

Records Review (The following Records Review tables reflect information provided before the walk-through of the facility, unless otherwise noted.)

Checklist(s) Used:
R5 CAFO Inspection Checklist
Federal CAFO Nutrient Management Plan Checklist
Facility Documents Reviewed:
Comprehensive Nutrient Management Plan (CNMP)

Facility Description

Type of Animal	Number of Animals	Capacity	Type of Confinement
Swine > 55 pounds	3000	9600	Total Confinement Building
Swine < 55 pounds	5000		Total Confinement Building
Minimum number of animals in previous 5 years:			0
Maximum number of animals in previous 5 years:			9000
Number of animals that are stabled/confined and/or fed/maintained for 45 days or more in previous 12 months:			8000
Amount of manure generated:			4.0 million gallons/year
Name of Certified Livestock Manager for facility (Illinois Only and if 300 animal units or greater):			Jared Schilling
Does the facility have an NPDES Permit?			No, but in the process of applying for one.
Other facilities under common ownership (name and address):			
None			

Livestock Waste Storage

Type of Storage	Storage Capacity	Type of Liner	Depth Markers Present	Last Time Waste was Removed	Days of Storage
3 Holding Ponds	5.6 million gallons (with the under-barn pits)	Unknown	Yes	In April 2012, waste was removed from the Stage 3 Holding Pond.	500 (with pits)
8' deep under-barn pits	5.6 million gallons (with the ponds)	Concrete			500 (with ponds)
Additional Information:		Holding ponds are at least 20 years old. Mr. Schilling believes they were designed by the previous family, the Range family.			

Livestock Waste Management

Describe the way manure is collected and disposed of at the facility:	<p>Manure from the under-barn pit of the Cable Bay Barn flows via gravity through an underground pipe to Stage 1 Manure Pond.</p> <p>Pits in Barns #1 - #12 are typically pumped to a tanker once or twice per year and then directly land applied.</p> <p>The manure holding ponds are typically not used but facility has the potential for Barns #1 - #12 to flow to Stage 1 Manure Pond.</p> <p>Overflow pipe in Stage 1 Manure Pond allows manure to flow via gravity through underground pipe to Stage 2 Manure Pond.</p> <p>Two overflow pipes from Stage 2 Manure Pond allow manure to flow to Stage 3 Manure Pond.</p>
Describe the way used bedding is collected and disposed of at the facility:	<p>Recycled cardboard is used for bedding.</p> <p>The bedding is collected every three weeks and put into the compost bunker. After composting, the compost is land applied.</p>
Describe the way mortalities are managed at the facility:	Mortalities are composted with sawdust.
Describe the way spilled drinking water for the animals is collected and disposed of at the facility:	Spilled drinking water flows to the under-barn pits and is managed with the manure.
Describe the way mist cooling water is collected and disposed of at the facility:	Process wastewater from the mist cooling system flows to the under-barn pits and is managed with the manure.

Describe how chemicals are stored and how used or spilled chemicals are collected and disposed of at the facility:	Chemicals are stored separately.
Describe the way water that has been used to wash/flush barns is collected and disposed of at the facility:	City water is used to wash the barns. The water flows into the under-barn pits and is managed with the manure.
Describe the way feed is contained and how runoff from feed is collected and disposed of at the facility:	Feed is stored in bulk bins. There is no feed runoff.

Land Application and Disposal of Manure and Process Wastewater

Number of acres available for land application:	1500
Are land application records kept?	No
Is manure transferred off-site to another party?	No
Are manure transfer records maintained?	N/A

Receiving Surface Waters

Describe the surface flow pathways:	<p>The facility lies on a topographic ridge. Some precipitation that falls directly on the facility flows to the east to drainage pathway. This drainage pathway joins another and then flows south to a third drainage pathway which the facility personnel call "The Ditch". The Ditch flows to the southwest to an intermittent unnamed tributary which flows approximately 1.0 mile to perennial Mud Creek.</p> <p>Some precipitation flows off the topographic ridge to the west approximately 0.10 mile to an intermittent unnamed tributary. This intermittent unnamed tributary flows south and joins the one on the south side of the facility before flowing to the west to perennial Mud Creek.</p> <p>Mud Creek flows approximately 2.3 miles to perennial Kaskaskia River.</p>
How many months out of the year is there flow in the nearest surface water pathway:	The Ditch has flow in it approximately two months out of the year and during rain events.
Are there any storm water pathways entering the facility?	No
Are there any clean water ponds on site?	There is one clean water pond in the southeast part of the facility.

What is the name of the first Traditional Navigable Water (TNW) for surface flow from the facility?	Mississippi River.
Is the surface water pathway nearest to the facility considered to be ephemeral, intermittent or perennial?	According to the National Hydrography Dataset by the United States Geologic Service, tributaries on the south and west sides are intermittent.
Is the surface water pathway nearest to the facility considered to be impaired?	The intermittent unnamed tributaries have not been assessed for impairments.

Nutrient Management Plan

NMP on site?	Yes
Date NMP Submitted:	8/3/12
Planner Name/Company:	Chris Wade of Frank and West
Storage Description:	8' deep under-barn pits. Three manure ponds in series.
Amount of Manure Generated:	4.0 million gallons/year
Amount of Storage:	5.6 million gallons/year
Duration of Storage:	500 days
Amount of Spreadable Land:	1500 acres
Mortality Management:	Composting with sawdust
Clean Water Diversion:	Clean storm water is kept away from pollutants, except that which falls directly on the manure ponds.
Direct Contact Prevention:	Animals are in total confinement.
Chemical Management:	Stored in separate room.
Conservation Practices:	Buffers and setbacks from wells and houses are identified.
Manure Testing:	Annually
Soil Testing:	Every 4 years.
Additional NMP comments:	None

Walkthrough of the Facility

EPA began the walkthrough of the facility on the southwest side of the facility at the office. EPA walked north and observed the Clean Water Pond and the drainage pathway, which the facility called "The Ditch" that crossed under the access road. The Ditch did not have any water in it on the day of the inspection.



IMGP0883: Clean water pond.
 Location: Along access road.
 Facing: East
 Date/Time: 08/27/12 11:02 A.M.



IMGP0884: Upstream of the drainage pathway which the facility personnel called "The Ditch". The Ditch flows from the east.
 Location: Along access road.
 Facing: East
 Date/Time: 08/27/12 11:03 A.M.



IMGP0885: Downstream of The Ditch.

Location: Along access road.

Facing: Southwest

Date/Time: 08/27/12 11:03 A.M.

EPA continued north along the access road to the Cable Bay Barn and the Brown Barn. Mr. Schilling lifted the cover of the under-barn pit of the Cable Bay Barn. EPA observed that the pit was not at capacity.



IMGP0886: Cable Bay in front and Brown Barn behind.

Location: Along access road.

Facing: Northeast

Date/Time: 08/27/12 11:07 A.M.



IMGP0887: Pit for Cable Bay has storage capacity left.

Location: North of Cable Bay

Facing: Down

Date/Time: 08/27/12 11:10 A.M.

From the access road south of Barn #12, EPA observed the Stage 1 Manure Pond and the overflow pipe that allowed manure to gravity flow to the Stage 2 Manure Pond.



IMGP0888: Stage 1 Manure Pond.

Location: Along access road.

Facing: Southwest

Date/Time: 08/27/12 11:13 A.M.



IMGP0889: 6" pipe for overflow from Stage 1 Manure Pond to Stage 2 Manure Pond.
 Pipe is underground and flows via gravity to Stage 2 Manure Pond.
 Location: Northeast of Stage 1 Manure Pond
 Facing: Southwest
 Date/Time: 08/27/12 11:13 A.M.

EPA also observed the inflow pipe from the Cable Bay to the Stage 1 Manure Pond.
 There was approximately two feet of freeboard in the Stage 1 Manure Pond on the day of the inspection.



IMGP0890: Inflow pipe from Cable Bay to Stage 1 Manure Pond.
 Location: Northeast of Stage 1 Manure Pond
 Facing: South
 Date/Time: 08/27/12 11:14 A.M.

EPA walked north along the east side of Barn #12 to Barn #7. A drainage pathway flowed to the east through a crop field and joined another drainage pathway in approximately 0.10 miles. This flow would eventually join The Ditch that flowed to the southwest, under the facility access road and joined the intermittent unnamed tributary on the south side of the facility. The Ditch was previously noted in photo IMGP0884.



IMGP0891: Barn #11 in foreground, Barn #12 behind.

Location: East of Barn #10

Facing: Southwest

Date/Time: 08/27/12 11:17 A.M.



IMGP0892: Drainage pathway on east side of facility.

Location: East of Barn #10

Facing: Southwest

Date/Time: 08/27/12 11:18 A.M.



IMGP0893: Drainage pathway flows to the east through crop field and joins another drainage pathway which flows to the south to The Ditch.

Location: East side of facility

Facing: East

Date/Time: 08/27/12 11:18 A.M.

After walking to the north end of the facility, EPA observed the facility between the barns then headed south along the west side of Barn #6 though Barn #1. EPA noted that the ground around the barns on the west side of the facility was denuded of vegetation. Pollutants from the barn fans had the potential to flow with precipitation to the intermittent unnamed tributary located west of the facility. This intermittent unnamed tributary was located approximately 0.10 miles to the west.



IMGP0894: Barns #7 - #12. Barn #7 is in foreground.

Location: Northeast of Barn #7

Facing: South

Date/Time: 08/27/12 11:20 A.M.



IMGP0895: Between the barns.

Location: North of barns

Facing: South

Date/Time: 08/27/12 11:21 A.M.



IMGP0896: Ground surface is denuded of vegetation on west side of facility.
 Location: Southwest of Barn #5
 Facing: North
 Date/Time: 08/27/12 11:25 A.M.



IMGP0897: Ground under the barn fans is denuded of vegetation.
 Location: West of Barn #4
 Facing: Northeast
 Date/Time: 08/27/12 11:26 A.M.



IMGP0898: Hillside to the west of Barn #4. Without vegetation, fan discharge can flow down the hillside during precipitation events.

Location: West of Barn #4

Facing: Northeast

Date/Time: 08/27/12 11: 26A.M.



IMGP0899: Ground surface west of Barns #5 and #6 is denuded of vegetation.

Location: West of Barn #4

Facing: North

Date/Time: 08/27/12 11:29 A.M.

After passing south of Barn #1, EPA walked to the west to the Compost Bunker. KJMM Pork & Grain uses sawdust to compost the mortalities in a three-bay concrete composting bunker. One bay contained unused sawdust, one bay was empty except for some process wastewater and one bay was overfilled with mortalities and the mortalities were not properly covered. Mortalities had also spilled out onto the ground around the Compost Bunker. In their inspection in April 2012, IEPA identified holes in the concrete on the east side of the Compost Bunker to allow the compost leachate to flow out. The facility has since plugged the holes. A drainage pathway was observed in the trees to the north. EPA walked the length of the drainage pathway until it ceased to be a clearly defined channel. There was no water in this pathway on the day of the inspection. EPA discussed with Mr. Schilling the potential for mortality leachate to flow with the storm water to the intermittent unnamed tributary to the west.



IMGP0900: East wall of Compost Bunker. Compost Bunker is overfilled and composting animal carcasses are on the ground around the bunker.

Location: Compost Bunker

Facing: South

Date/Time: 08/27/12 11:32 A.M.



IMGP0901: Mortalities in Compost Bunker are not properly covered.

Location: Compost Bunker

Facing: West

Date/Time: 08/27/12 11:33 A.M.



IMGP0902: North side of Compost Bunker. Previously, there was a hole in the bunker on the east side to allow leachate from bunker to flow to the north. Facility owners have since closed the hole.

Location: Compost Bunker

Facing: Southeast

Date/Time: 08/27/12 11:33 A.M.



IMGP0903: Drainage pathway that precipitation would follow after picking up pollutants from compost material on the ground around Compost Bunker.

Location: North of Compost Bunker

Facing: North

Date/Time: 08/27/12 11: 34A.M.



IMGP0904: Channelization in drainage pathway leading from Compost Bunker area.

Drainage pathway flows to the north.

Location: North of Compost Bunker

Facing: North

Date/Time: 08/27/12 11:35 A.M.



IMGP0905: Drainage pathway from Compost Bunker area flows through wooded area. After flowing north, the drainage pathway turned toward the west. Location of stream is to the west.

Location: North of Compost Bunker

Facing: West

Date/Time: 08/27/12 11:36 A.M.



IMGP0906: Drainage pathway flows from the Compost Bunker area to the north.

Location: North of Compost Bunker

Facing: South

Date/Time: 08/27/12 11:36 A.M.



IMGP0907: Compost Bunker is not maintained properly. One bay is not used, while others are overfilled. Mortalities are not covered.

Location: South of Compost Bunker

Facing: North

Date/Time: 08/27/12 11:43 A.M.



IMGP0908: Compost Bunker has a bay that is not being used while other bays are overfilled. Sawdust is stored in the left bay, mortalities composted in the right.

Location: South of Compost Bunker

Facing: North

Date/Time: 08/27/12 11:44 A.M.

Leaving the compost area, EPA walked east and observed the White Barn. During the IEPA inspection in April 2012, the pit below this barn was overflowing onto the ground. The facility owners have since pumped down the pit and cleaned up the manure around the barn.



IMGP0909: White Barn load in/out area. Previously, this barn's pit had overflowed onto the ground around the barn. No manure was evident on the ground during this inspection.

Location: South of White Barn

Facing: North

Date/Time: 08/27/12 11:45 A.M.

EPA then walked south to observe the Stage 2 Manure Pond. The berm of this pond had a small amount of woody growth that needed to be removed and vegetation that needed to be mowed. Mr. Schilling identified for EPA the inflow pipe from the Stage 1 Manure Pond into the Stage 2 Manure Pond, the two outflow pipes to the Stage 3 Manure Pond and another inflow pipe of unknown origin. By the position and orientation of this pipe, Mr. Schilling believed the pipe to originate in the unused barns west of the Cable Bay.



IMGP0910: Stage 2 Manure Pond has vegetation that needs to be mowed on the berms.
 Location: Northeast of Stage 2 Manure Pond
 Facing: West
 Date/Time: 08/27/12 11:48 A.M.



IMGP0911: Stage 2 Manure Pond has a small amount of woody growth that needs to be removed from the berms.
 Location: Northeast of Stage 2 Manure Pond
 Facing: Southwest
 Date/Time: 08/27/12 11:49 A.M.



IMGP0912: Inflow pipe from Stage 1 Manure Pond to Stage 2 Manure Pond. Berms need to be mowed and woody growth removed.

Location: East of Stage 2 Manure Pond

Facing: Northwest

Date/Time: 08/27/12 11:49 A.M.



IMGP0913: Another pipe to Stage 2 Manure Pond. Facility representative did not know where this pipe originates. It could possibly originate from old barns west of Cable Bay that are not used to house animals anymore.

Location: East of Stage 2 Manure Pond

Facing: Northwest and down

Date/Time: 08/27/12 11:50 A.M.



IMGP0914: Two pipes allow manure from Stage 2 Manure Pond to flow into Stage 3 Manure Pond.

Location: East of Stage 2 Manure Pond

Facing: Southwest

Date/Time: 08/27/12 11:52 A.M.

EPA walked along the east side of the Stage 2 Manure Pond to the Stage 3 Manure Pond. EPA observed the two inflow pipes from the Stage 2 Manure Pond. A staff gauge on the southeast side of the berm indicated that there was at least three feet of freeboard.

In their April 2012 inspection, IEPA inspectors identified a pipe from the Stage 3 Manure Pond to the intermittent unnamed tributary just to the south. Facility owners have since removed the pipe.



IMGP0915: Inflow pipes from Stage 2 Manure Pond to Stage 3 Manure Pond.

Location: East of Stage 3 Manure Pond

Facing: West

Date/Time: 08/27/12 11:53 A.M.



IMGP0916: Staff gauge in Stage 3 Manure Pond.

Location: East of Stage 3 Manure Pond

Facing: West

Date/Time: 08/27/12 11:54 A.M.



IMGP0917: A pipe from the Stage 3 Manure Pond used to exist in this location. The pipe discharged manure from the Stage 3 Manure Pond to an intermittent unnamed tributary. The facility owners have since removed the pipe.

Location: South of Stage 3 Manure Pond

Facing: West

Date/Time: 08/27/12 11:55 A.M.



IMGP0918: Intermittent unnamed tributary that previously received manure from the Stage 3 Manure Pond.

Location: South of Stage 3 Manure Pond

Facing: Southwest

Date/Time: 08/27/12 11:55 A.M.

Closing Conference and Post-Inspection

Specific "Areas of Concern" discussed with facility personnel:	
EPA discussed the lack of vegetation around the barns and the potential for pollutants to deposit on the ground beneath the barn fans. During precipitation events, the pollutants have the potential to flow with the storm water to the intermittent unnamed tributary to the west.	
EPA discussed the presence of mortalities lying next to the Compost Bunker with Mr. Schilling. EPA explained that since the Compost Bunker was overfilled and mortalities are lying on the ground outside the bunker, pollutants from the decomposing animals could flow with storm water to the intermittent unnamed tributary to the west.	
EPA also discussed the management of the Compost Bunker with Mr. Schilling. The mortalities in the bunker were not properly covered to prevent scavenging by animals and promote proper composting.	
Compliance assistance materials given to facility personnel:	
None	
Disposable Boots Left at Facility?	Yes
Vehicle Washed after leaving facility?	Yes
Date and Time that vehicle was washed:	August 27, 2012 approximately 7:00 P.M.

AREA OF CONCERN

EPA observed this area of concern whereby pollutants have the potential to reach waters of the United States:

1. Process wastewater from the Compost Bunker could flow with storm water from precipitation events to the intermittent unnamed tributary.

LIST OF ATTACHMENTS

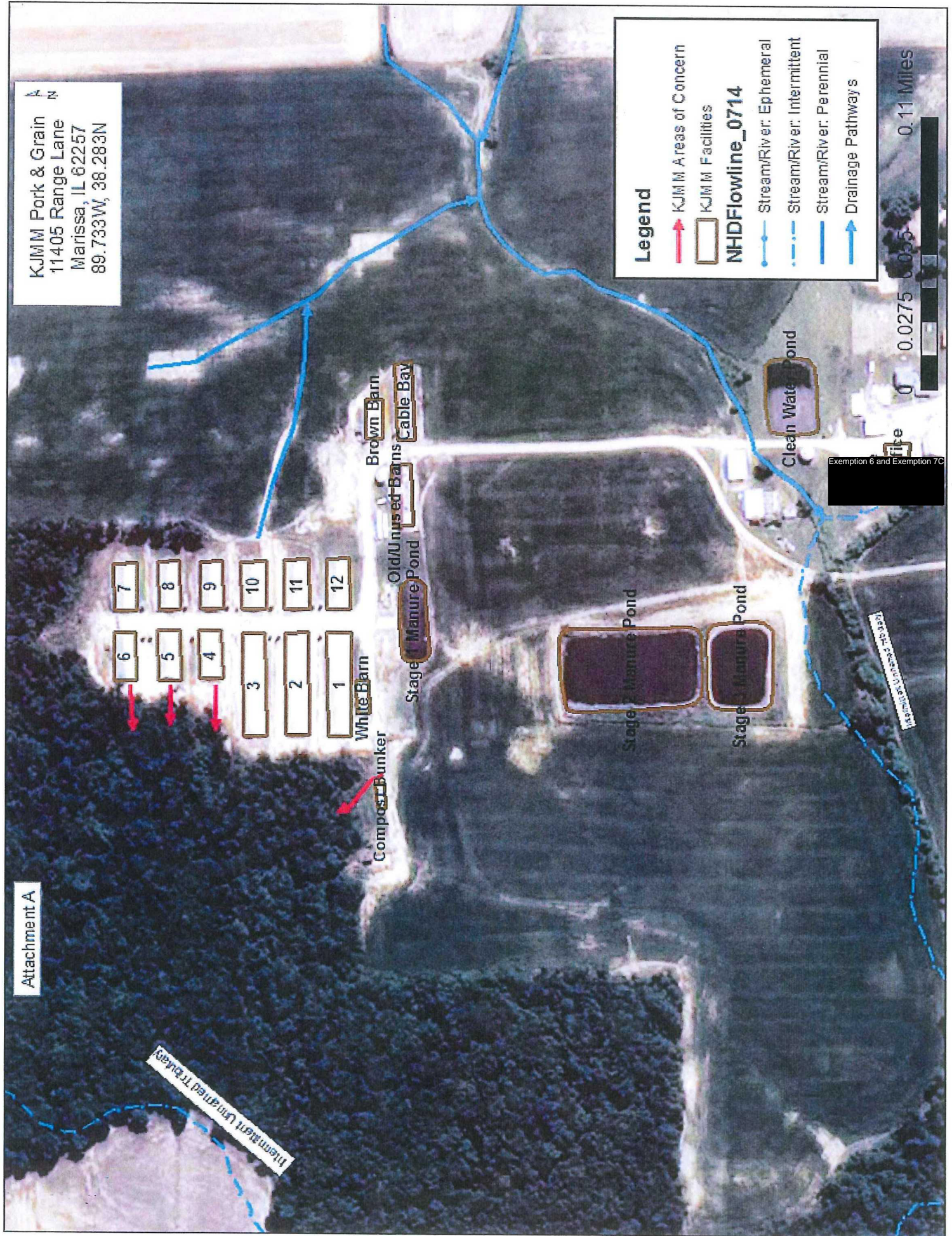
- A) Aerial photograph of KJMM Pork & Grain – Range Farm with buildings, waterways and discharge pathways labeled.
- B) Aerial photograph of KJMM Pork & Grain – Range Farm with intermittent and perennial streams identified.

Attachment A

KJMM Pork & Grain
11405 Range Lane
Marissa, IL 62257
89.733W, 38.283N

Legend

- KJMM Areas of Concern
- KJMM Facilities
- NHDFlowline_0714
- Stream/River: Ephemeral
- Stream/River: Intermittent
- Stream/River: Perennial
- Drainage Pathways



0.11 Miles

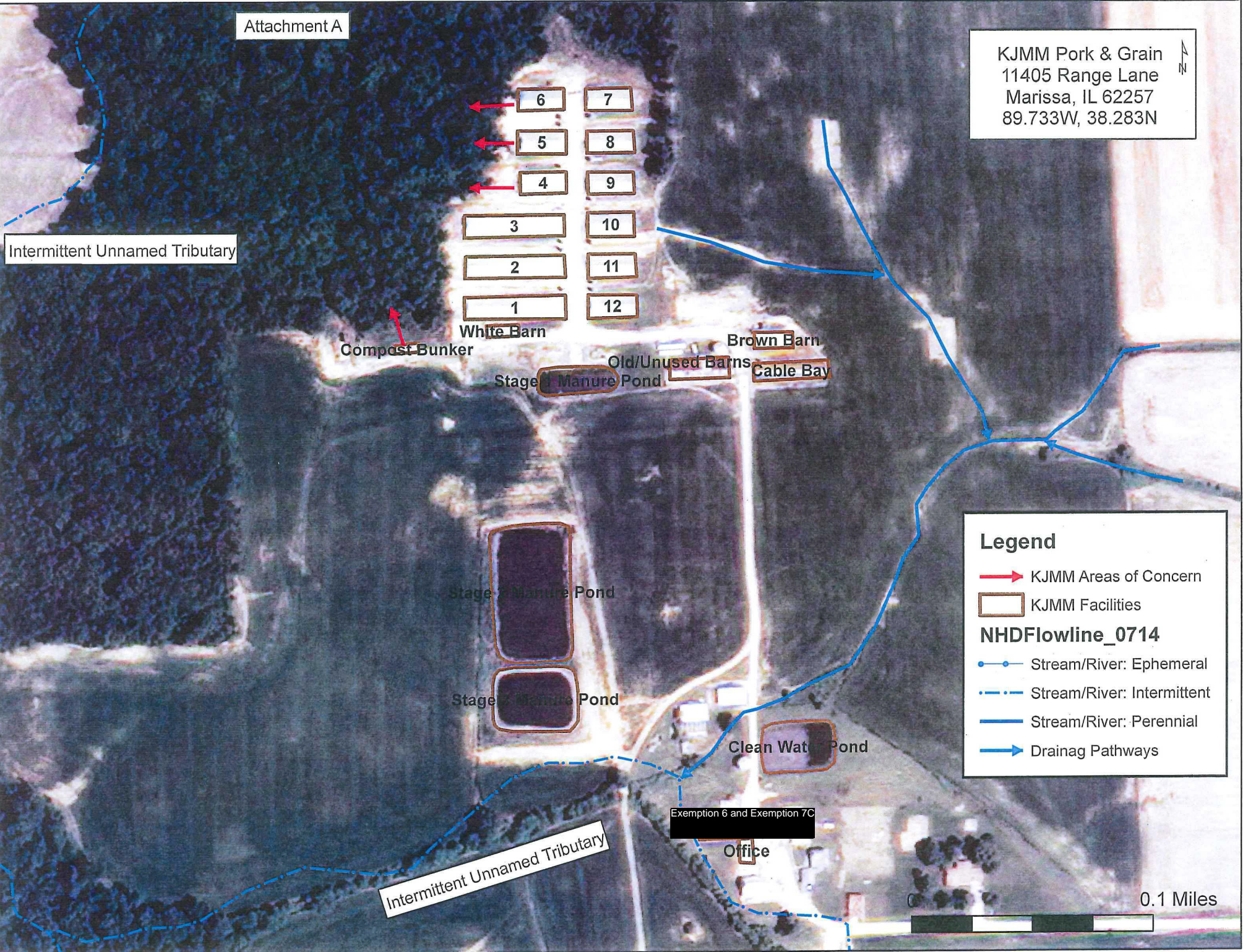
0.0275 Miles

File

Exemption 6 and Exemption 7C

KJMM Pork & Grain
11405 Range Lane
Marissa, IL 62257
89.733W, 38.283N

Intermittent Unnamed Tributary



0.1 Miles

KJMM Pork & Grain
11405 Range Lane
Marissa, IL 62257
89.733W, 38.283N

Intermittent Unnamed Tributary

Intermittent Unnamed Tributary

Mud Creek

Legend

KJMM Facilities

NHDFlowline_0714

Stream/River: Ephemeral

Stream/River: Intermittent

Stream/River: Perennial

Drainage Pathways

0 0.125 0.25

0.5 Miles